

ABSTRACT OF THE DISCLOSURE

A method and apparatus for providing an active standby control system comprising the steps of providing a first and second programmable logic controller (PLC), each controller having an operating state. Each controller further including a network module board operably connected to a network; a control unit, a remote I/O head; and, a hot standby module, each hot standby module is operably connected together. Operably connecting each programmable logic controller to a network. Assigning a network address identifier, i.e., Internet Protocol or Media Access Control address, to each programmable logic controller and sensing the operating state of each programmable logic controller. The network address identifier of each programmable logic controller is determined by the operating state of each respective programmable logic controller. The present invention is also directed to an apparatus for communication with at least one device which resides on a standard communications network using a standard communications protocol. The apparatus has a scanner for scanning the device, a device scan table for storing data relating to the device, and a standard communications interface for interfacing between the device scanner and the standard communications network using the standard communication protocol. The present invention is also directed to a device scanner for a first device located on a first node of a standard communications network. The device scanner is provided for scanning devices on the standard communications network, and for identifying a second device on a second node of the standard communications network. The device scanner has an initiator for initiating a first communications command in a peer protocol format to the second node, a receptor for receiving from the second node a second communications command in the peer protocol format, in response to the first communications command, and an identifier for identifying the second device on the second node as a peer device. This apparatus and device can be used within a control system for monitoring input devices and for controlling output devices which reside on the standard communications network. The standard communications network can be an Ethernet network, and the standard communications protocol used therein can TCP using Modbus.

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